

AMENDMENTS TO THE DRAWINGS:

A replacement FIG. 1 is submitted herewith. In FIG. 1, the reference number 13 is relabeled as, "INSTRUCTION SEQUENCE SELECTING UNIT."

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

I. STATUS OF THE CLAIMS

Claims 2, 3, 7, and 8 are cancelled herein without prejudice or disclaimer.

Claims 1, 4-6, 9, and 10 are amended herein and new claims 11 and 12 are added.

In view of the above, it is respectfully submitted that claims 1, 4-6, 9, and 10-12 are currently pending and under consideration.

II. REJECTION OF CLAIMS 2, 3, 7, AND 8 UNDER 35 U.S.C. §112, FIRST PARAGRAPH

Claims 2, 3, 7, and 8 are cancelled herein. Claim 1 is amended herein and teaches that interference checking between objects is made based on the relative position/direction information of the three-dimensional configuration information (see page 23, lines 13-17 of Applicant's specification).

In view of the above, it is respectfully submitted that the rejection is overcome.

III. REJECTION OF CLAIMS 4, 5, 9, AND 10 UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Claims 4, 5, 9, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4, 5, 9, and 10 are amended herein to overcome the rejection.

Regarding claims 4 and 9, the constraints between objects defines a relationship in which one object is constrained by another object and cannot move alone, and a restriction on the move direction or the movable range of an object (see page 15, lines 2-5 of Applicant's specification).

Regarding claims 5 and 10, the object operating unit operates an object in virtual space and upon receipt of an input of an object operation instruction from a user. At this time, the interference detecting unit checks the interference between objects which accompany the operation. If the interference occurs, the interference avoiding unit modifies the move direction of an object to a direction where the interference is resolved, so that the interference is avoided. If the interference cannot be avoided, the object operation instruction becomes an error. Or, if an object can be moved without causing interference, the object operation instruction is stored in a corresponding instruction

sequence within the operation instruction storing unit via the instruction sequence selecting unit. The object operating unit also performs a constraint deletion operation for an object. This constraint deletion operation is implemented by an operation for removing an object from a tree to which the object belongs. As a result, the object is released from the constraint of, for example, a parent object. (see page 16, line 11-page 17, line 6 of the Applicant's specification).

In view of the above, it is respectfully submitted that the rejection is overcome.

IV. REJECTION OF CLAIMS 1 AND 6 UNDER 35 U.S.C. § 102(A) AS BEING ANTICIPATED BY ESPINOSA-AGUILAR ET AL.

Claim 1 (as amended herein) relates to an animated creating/editing apparatus. The apparatus comprises, "a three-dimensional model storing unit storing an object configuring an image of an animation as three-dimensional model information, wherein the three-dimensional model information has a tree structure configured by a plurality of hierarchies which represent constraint conditions of the three-dimensional model, and each of the hierarchies are composed of plural nodes which represent position/direction and shapes information of the three-dimensional model; an operation instruction editing unit creating/editing an operation instructions sequence for creating/editing an animation, wherein the operation instructions sequence comprises object operation instructions and eye point operation instructions; an interference detecting unit detecting an occurrence of interference between objects based on position/direction and shape information of the three-dimensional model information, which is caused by executing the object operation instruction; an interference avoiding unit generating an object operation instruction to avoid the interference, if the occurrence of the interference is detected by said interference detecting unit; a discontinuity detecting unit detecting an occurrence of discontinuous scenes, which is caused by executing the eye point operation instruction or the object operation instruction; and a complementary instruction generating unit generating an object operation instruction or an eye point operation instruction to generate a scene which complements between the discontinuous scenes, if the occurrence of the discontinuous scenes is detected by said discontinuity detecting unit."

Espinosa-Aguilar relates to creating and animating a three-dimensional character.

However, Espinosa-Aguilar does not teach or suggest the features as recited in the amended claim 1.

Claim 6 of the present invention relates to process that comprises similar features as those recited in claim 1. Accordingly, it is submitted that Espinosa-Aguilar does not teach or suggest the features as recited in claims 1 and 6 of the present invention.

In view of the above, it is respectfully submitted that the rejection is overcome.

V. REJECTION OF CLAIMS 2, 4, 7, AND 9 UNDER 35 U.S.C. § 103(A) AS BEING UNPATENTABLE OVER ESPINOSA-AGUILAR ET AL. AS APPLIED TO CLAIMS 1 AND 6 ABOVE, AND FURTHER IN VIEW OF LANDER ET AL.

Claim 2 and 7 are cancelled herein.

Claims 4 (depending from claim 1) and 9 (depending from claim 6) recite patentably distinguishing features of their own, and further, are at least patentably distinguishing due to their dependencies from independent claims 1 and 6. Claim 4 recites, "the three-dimensional model information holds a constraint condition between objects which represented by a node in a lower hierarchy of the three-dimensional model information is constrained by a node in a higher hierarchy; and a constraint detecting unit detecting an object operation instruction which violates the constraint condition as an error is further comprised, wherein an unconstrained object is freely moved as far as it does not interfere with another object, and, a constrained object having a predetermined movable range is moved within said movable range as far as it does not interfere with another object."

Claim 9 recites, "holding a constraint condition between objects in the three-dimensional model information which represented by a node in a lower hierarchy of the three-dimensional model information is constrained by a node in a higher hierarchy; and detecting an object operation instruction which violates the constraint condition as an error, wherein an unconstrained object is freely moved as far as it does not interfere with another object, and, a constrained object having a predetermined movable range is moved within said movable range as far as it does not interfere with another object."

The combination of Espinosa-Aguilar and Lander does not produce the results of the features recited in the amended claims 4 and 9.

In view of the above, it is respectfully submitted that the rejection is overcome.

VI. REJECTION OF CLAIMS 5 AND 10 UNDER 35 U.S.C. § 103(A) AS BEING UNPATENTABLE OVER ESPINOSA-AGUILAR ET AL. AS APPLIED TO CLAIMS 1 AND 6 ABOVE, AND FURTHER IN VIEW OF COYNE ET AL.

Claims 5 (depending from claim 1) and 10 (depending from claim 6) recite patentably distinguishing features of their own, and further, are at least patentably distinguishing due to their dependencies from independent claims 1 and 6. Claim 5 recites, "an editing rule storing unit storing editing rules for editing the object operation instructions sequence when an object operation instruction is inserted/deleted/moved in/from/within the operation instruction sequence, when an animation is edited; and an operation instruction editing unit referencing the editing rules, and preventing/avoiding an operation if the operation for inserting /deleting/moving an object operation instruction which violates the editing rules in/from/within the operation instruction sequence is performed."

Claim 10 recites, "storing, in a second storing unit, editing rules for editing the object operation instructions sequence when an object operation instruction is inserted/deleted/moved in/from/within the operation instruction sequence, when an animation is edited, and referencing the editing rules, and preventing/avoiding an operation if the operation for inserting/deleting/moving an object operation instruction which violates the editing rules in/from/within the operation instruction sequence is performed."

The combination of Espinosa-Aguilar and Coyne does not produce the results of the features recited in the amended claims 5 and 10.

In view of the above, it is respectfully submitted that the rejection is overcome.

VII. NEW CLAIMS

New claims 11 and 12 are added and depend respectively from claims 1 and 6. Claims 11 (depending from claim 1) and 12 (depending from claim 6) recite patentably distinguishing features of their own, and further, are at least patentably distinguishing due to their dependencies from independent claims 1 and 6.

VIII. CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

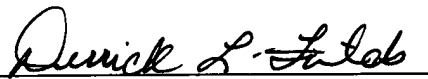
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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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